

I Claim:

- 1 1. A method for creating a dummy metal fill pattern near functional circuitry, comprising:
 - 2 a. creating a margin area around the functional circuitry;
 - 3 b. trimming a dummy fill pattern to the margin area to create a trimmed fill pattern; and
 - 4 c. overlaying said trimmed fill pattern and the functional circuitry.
- 1 2. The method for creating a dummy metal fill pattern of claim 1, and further including:
 - 2 removing excess metal between step b and step c.
- 1 3. The method for creating a dummy metal fill pattern of claim 2, wherein:
 - 2 the excess metal is at least one metal sliver.
- 1 4. The method for creating a dummy metal fill pattern of claim 3, wherein:
 - 2 the metal sliver is a thin strip of metal created when the margin area is removed from the
 - 3 dummy fill pattern.
- 1 5. The method for creating a dummy metal fill pattern of claim 1, wherein:
 - 2 the dummy fill pattern is an example of an alternative functional circuitry.
- 1 6. The method for creating a dummy metal fill pattern of claim 5, wherein:
 - 2 the alternative functional circuitry is selected to be alike to that near the functional
 - 3 circuitry.
- 1 7. The method for creating a dummy metal fill pattern of claim 5, wherein:
 - 2 the alternative functional circuitry is a selected portion of functional circuitry from a metal
 - 3 layer on which the dummy metal fill pattern is to be used.

- 1 8. The method for creating a dummy metal fill pattern of claim 1, wherein:
2 the dummy metal fill pattern is created on a metal layer of an LCOS array.
- 1 9. The method for creating a dummy metal fill pattern of claim 1, wherein:
2 the dummy metal fill pattern is created on a layer under a mirror layer of an LCOS array.
- 1 10. The method for creating a dummy metal fill pattern of claim 1, wherein:
2 the dummy metal fill pattern is created on a layer of a reflective LCOS array.
- 1 11. The method for creating a dummy metal fill pattern of claim 1, and further including:
2 selecting a fill metal pattern between step a and step b.
- 1 12. The method for creating a dummy metal fill pattern of claim 11, wherein:
2 the fill metal pattern is selected to be a pattern of alternative functional circuitry.
- 1 13. The method for creating a dummy metal fill pattern of claim 1, wherein:
2 said margin area is created by growing the area of the functional circuitry.
- 1 14. A metal fill pattern comprising:
2 a first circuitry pattern;
3 a margin area around said first circuitry pattern; and
4 a second circuitry pattern, wherein:
5 said second circuitry pattern is trimmed to avoid the margin area.
- 1 15. The metal fill pattern of claim 13, wherein:
2 the first circuitry pattern is functional circuitry.
- 1 16. The metal fill pattern of claim 14, wherein:
2 the second circuitry pattern is electrically non-functional.

1 17. The metal fill pattern of claim 14, wherein:

2 the second circuitry pattern is selected to be a functional circuitry pattern located near the
3 first circuitry pattern on a metal layer.

1 18. The metal fill pattern of claim 14, wherein:

2 said first circuitry pattern and said second circuitry pattern are patterns on a metal layer of a
3 reflective LCOS array.

1 19. The metal fill pattern of claim 14, wherein:

2 said first circuitry pattern and said second circuitry pattern are patterns on a single metal
3 layer of a reflective LCOS array.

1 20. The metal fill pattern of claim 14, wherein:

2 at least one is artifact removed from the second circuitry pattern.

1 21. The metal fill pattern of claim 20, wherein:

2 the artifact includes a metal sliver remaining after said second circuitry pattern is trimmed.

1 22. The metal fill pattern of claim 14, wherein:

2 the second circuitry pattern is a functional circuitry pattern which is used as dummy fill
3 metal.

1 23. A method for providing dummy fill in a LCOS array, comprising:

2 selecting a metal fill pattern from functional circuitry on a layer of the array; and
3 filling an unfilled area with the metal fill pattern.

1 24. The method for providing dummy fill of claim 23, and further including:

2 filling a partially filled area with a portion of the metal fill pattern.

NOTICE: This correspondence chart is provided for informational purposes only. It is not a

15 part of the official Patent Application.

CORRESPONDENCE CHART

10	METHOD FOR CREATING DUMMY FILL METAL
20 11	REFLECTIVE LCOS ARRAY
12	MATERIAL LAYERS
14	MIRROR LAYER
16	M1 METAL LAYER
18	M2 METAL LAYER
25 20	M3 METAL LAYER
22	POLY LAYER
24	DIFFUSION LAYER
26	SEMICONDUCTOR JUNCTION
28	INSULATING LAYERS
30 29	CIRCUITRY AREA
31	UNFILLED AREA
30	PORTION OF EXAMPLE METAL LAYER
32	FUNCTIONAL CIRCUITRY
34	MARGIN AREA
35 38	FILL AREA
40	FUNCTIONAL CIRCUITRY AREA
50	METAL FILL PATTERN
52	FILL METAL TRACES
54	UNFILLED SPACE
40 55	SELECT METAL FILL PATTERN OPERATION
56	MODIFY METAL FILL PATTERN OPERATION
57	FILL UNFILLED AREAS OPERATION
58	FILL PARTIALLY FILLED AREAS OPERATION

	59	GROW MARGIN AREA OPERATION
45	60	TRIM DOWN TO MARGIN OPERATION
	62	FIRST TRIMMED FILL PATTERN
	64	FIRST TRIMMED METAL TRACES
	66	METAL SLIVER
	70	REMOVE DUMMY SLIVERS OPERATION
50	72	SECOND TRIMMED FILL PATTERN
	74	SECOND TRIMMED METAL TRACES
	76	COMPLETED METAL TRACE PATTERN
	78	OVERLAY FUNCTIONAL AND DUMMY PATTERNS OPERATION

45 60 TRIM DOWN TO MARGIN OPERATION
 62 FIRST TRIMMED FILL PATTERN
 64 FIRST TRIMMED METAL TRACES
 66 METAL SLIVER
 70 REMOVE DUMMY SLIVERS OPERATION
 50 72 SECOND TRIMMED FILL PATTERN
 74 SECOND TRIMMED METAL TRACES
 76 COMPLETED METAL TRACE PATTERN
 78 OVERLAY FUNCTIONAL AND DUMMY PATTERNS OPERATION